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**From:** Berkoff, Michael  
**Sent:** Mon 11/27/2017 7:32:51 PM  
**Subject:** Wolverine - Technical questions from EPA

David,

I hope that you had a nice Thanksgiving break. Thank you for MDEQ's continued efforts to share reports and information with EPA. As we go through these documents and those that you and MDEQ staff have sent to us, are there any reports or documents that contextualize or summarize the individual data reports. As you will see by some of the questions that we list below, EPA is trying to see a geographic extent of sampling data. In regards to the drinking water and any groundwater data, are there any maps of data that attempt to define a plume? If so, please direct us to that/those document(s).

I have included in the body of this email a list of questions that EPA has regarding the Wolverine Site. These include questions regarding data, the investigations to date, the water filters which WWW has installed at residences and community outreach. I understand that it may take a while to track down the answers to all of these questions, so please respond to the general questions by COB tomorrow. Those should not require a great deal of digging through reports. Please contact me with any questions you have regarding this email.

## **Questions for MDEQ about Wolverine**

### **General Questions**

- 1) Has MDEQ reviewed any WWW workplans that detail sampling and analysis procedures employed by WWW contractors or labs? Even if they were not subject to MDEQ review, does MDEQ have any copies of the plans used by WWW?
- 2) Does MDEQ have any figures or maps that show the locations for those samples collected by WWW and their contractors?
- 3) Does MDEQ have any maps showing the locations which residents have either been provided bottled water or had water filters installed?
- 4) What constituents has WWW tested for in each media?

- a. Drinking water
- b. Groundwater
- c. Surface water
- d. Soil
- e. Sediments

5) Please provide a list of community engagement activities conducted by either MDEQ or WWW.

### **Water Testing**

- 1) We understand that Wolverine has/is testing residential drinking water wells in three investigation areas (Study Area, Buffer Zone and South Expansion Area). Are other homes beyond these areas being tested either by Wolverine or MDEQ (i.e., near potential disposal sites, areas beyond the South Expansion Area, etc.)?
- 2) Are there any documents that track or map which homes have been sampled, received results, factsheets, bottled water, point-of-use and/or point-of-entry devices?
- 3) Beyond Plainsfield Township PWS, have other public water systems of any type (community, nontransient, transient, etc.) in the area around House Street landfill, the tannery or other known disposal sites been tested for PFAS or other contaminants of concern from the Wolverine Facility? If yes, which ones were tested and what were the findings?
- 4) Reports indicate that the commercial lab conducting the PFAS analyses is using a modified version of EPA Method 537. What modifications have been made to 537? Do you know how these changes would affect data quality?
- 5) Has there been any review of SOPs, internal validation data, etc. by MDEQ?
- 6) Is retesting or confirmation samples done by Wolverine for residential well water near the 70 ppt PFOS-PFOA level?
- 7) Will MDEQ ask Wolverine to test areas beyond the ones that have already been tested? If yes, how will those areas be determined?

### **Communications with the Residents to Do the Drinking Water Testing and after the Testing**

- 8) How is WWW asking the residents for permission to test their water?

- a. Is a letter being sent to them? If there is a letter, may we have a copy?
  - b. Is Wolverine going door to door to talk to the residents?
- 9) How are the residents notified about the results of the drinking water test? If they are sent a letter, may we have a copy?

### **Tannery and Disposal Area Investigations**

- 10) What soil and sediment data has WWW collected at the source areas (the Tannery and at the disposal areas)? What constituents? How does Wolverine/MDEQ determine the extent of soil to sample (both depth and aerial extent)? Please direct us to those reports containing those results.
- 11) Are there any figures showing the locations of samples within the source areas?
- 12) What methods does WWW use in testing leather scrap?
- 13) Does MDEQ have sample analysis results for the tannery sludge?
- 14) Is there a disposal in the Tannery? If so, has it been sampled?

### **Whole House Filters**

- 1) Who is designing the filters? If an engineer is designing the filters, are they licensed in Michigan?
- 2) Who is installing the filters? If plumbers are installing the filters, are they certified? If someone other than a plumber is installing filters, does he have any training or a certification? If yes, what?
- 3) Does Wolverine test the residents' water for any other contaminants before installing the filters to help determine design parameters of the filters? If yes, which analytes are tested and what analytical methods are used?
- 4) Does Wolverine or the company installing the filters evaluate the water pressure, water flow, piping in the home, or any other characteristics of the home before filters are installed? If yes, please detail.
- 5) Does Wolverine or the company installing the filters give the residents a questionnaire about the water system in their homes and their water usage before the filters are installed? If a questionnaire is given, may we have a copy of that?
- 6) Is anything else installed besides a filter? For example, is chlorine or another disinfectant added or any other treatment process?

- 7) Is the residents water tested after the filters are installed? If yes, what is it tested for and what analytical methods are used?
- 8) Are the residents given a contact phone number after the filters are installed in case they have problems with the filters? Who do the residents talk to at MDEQ should they have complaints regarding the filters?
- 9) Do the residents sign a contract with Wolverine for the filter installation and maintenance? If the residents do sign a contract, may we have a copy?
- 10) Does Wolverine test the water after the filter is installed to ensure that it is removing PFAS? If Wolverine does test the water after the filter is installed, what concentration is considered acceptable?
- 11) How often will the water be tested after the filters are installed?
- 12) Will Wolverine change the filter cartridges later for the residents? If yes, how often will this occur?
- 13) Is any other maintenance performed by Wolverine on the whole house filter?
- 14) Does Wolverine or MDEQ provide the residents with any information about maintaining and using the filters? If yes, may we have copies of that?
- 15) Does Wolverine or MDEQ suggest the residents do any of the maintenance of the filters themselves? If so, what is the advice being given?

Thank you,

Michael

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